

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-4. (canceled)

5. (currently amended) An oxidation method of a semiconductor substrate having an STI region, comprising the steps of:

etching a semiconductor region to form a trench;

preparing dichloroethylene (DCE); and

subjecting an exposed inside upper end portion of the trench to halogen oxidation with the dichloroethylene and oxygen, whereby a thickness of an oxide film at a corner portion of the semiconductor region adjacent to said upper end portion of the trench is greater than a thickness of said oxide film at other portions of the trench, the halogen oxidation being carried out at a temperature between 850 and 950°C in an atmosphere within a furnace, by controlling a concentration of the DCE within a range between 0.45 and 1.97% by weight, to thereby render a stress imposed on the upper corner portion of the trench to less than 100 MPa.

6-10. (canceled)

11. (currently amended) An oxidation method of oxidizing an inner wall of a trench formed in a semiconductor region of a semiconductor substrate, the method comprising the steps of:

preparing dichloroethylene (DCE); and

carrying out halogen oxidation of an exposed inner wall of the trench using the DCE and oxygen,

the halogen oxidation being carried out at a temperature between 850 and 950°C in an atmosphere within a furnace, by controlling a concentration of the DCE within a range between 0.45 and 1.97% by weight, to thereby render a stress imposed on the upper corner portion of the trench to less than 100 MPa.

12. (currently amended) The oxidation method as claimed in claim 11, wherein the halogen oxidation is carried out by bubbling the DCE with nitrogen to vaporize the DCE to be introduced into the furnace together with the oxygen and by controlling a content of the DCE introduced into the furnace;

the content of the DCE in the furnace being determined by the oxygen introduced into the furnace and the nitrogen used for bubbling the DCE by controlling a flow rate of the ~~oxygen~~ nitrogen to a flow rate of the ~~nitrogen~~ oxygen to 0.01.

13. (canceled)

14. (currently amended) The oxidation method of the semiconductor substrate according to claim 5, comprising the step of: using nitrogen as a carrier gas, bubbling with the nitrogen to vaporize the dichloroethylene, and introducing, together with oxygen, the dichloroethylene into a furnace containing a semiconductor substrate in which the trench is formed, ~~wherein a content of the dichloroethylene in an oxygen environment in the furnace is decided by a weight percent between a weight of oxygen introduced into the furnace and the DCE introduced into the furnace by the bubbling.~~

15.-16. (canceled)